

To: Pierce, Maggie[Pierce.Maggie@epa.gov]
From: Schmidt, Andrew
Sent: Mon 8/17/2015 2:23:52 PM
Subject: FW: Reuters query RE: Gold King Mine discharge volume as per USGS stream gauge

FYI

Andrew P. Schmidt, P.G.

Regional Hydrogeologist

US EPA Region 8, 8EPR-S

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Please consider the environment before printing this email.

From: Suzanne Paschke [mailto:spaschke@usgs.gov]
Sent: Friday, August 14, 2015 6:47 PM
To: Robert Horton; Schmidt, Andrew; Coursen, Robin; Schmittiel, Paula
Subject: Fwd: Reuters query RE: Gold King Mine discharge volume as per USGS stream gauge

Thanks to Katie Walton-Day and Bob Kimbrough for their response to this media inquiry. Bob, Andrew, and Paula, please forward within as appropriate. Thanks to all. Suzanne

Sent from my iPhone

Begin forwarded message:

From: "Walton-Day, Katie" <kwaltond@usgs.gov>
Date: August 14, 2015 at 16:14:43 MDT
To: "Koontz, Heidi" <hkoontz@usgs.gov>, steve.gorman@thomasreuters.com
Cc: Robert Kimbrough <rakimbrow@usgs.gov>, [paschke](mailto:spaschke@usgs.gov) <spaschke@usgs.gov>

Subject: Re: Reuters query RE: Gold King Mine discharge volume as per USGS stream gauge

Hi Steve. This is a quote from Bob Kimbrough, who is the Associate Director for Data here in the Colorado Water Science Center, and who is in charge of all of our streamgages: *Our streamgage captured very nicely the amount of water above existing streamflow for the spill event. Post spill it is not feasible to attribute a percentage of Cement Creek streamflow measured at the streamgage to Gold King mine effluent. Therefore, I recommend EPA's estimate of effluent being discharged to the creek be used.*

In other words, our stream gage at Cement Creek at the mouth was able to record the large volume event that occurred on August 5th. But the continued low flow from the Gold King is too small to be seen above all the other flow in the creek. The gage in Cement Creek is about 10 miles downstream from the Gold King Mine. So, it captures all the flow in Cement Creek, including the Gold King. If there was a gage directly below the Gold King, it would be possible to accurately perform the calculations you are thinking of. The website for the Cement Creek gage is here: http://waterdata.usgs.gov/co/nwis/uv/?site_no=09358550&PARAMeter_cd=00065.00060 If you start on August 5, you can clearly see the flow that occurred that day that marks the spill at Gold King. Other peaks in flow on August 7 and August 12 are likely from local rain storms as they also show up on other nearby gages... this is the website for the Animas River at Silverton which is upstream from Cement Creek. It shows similar August 7 and August 12 peaks, but no big peak similar to the Cement Creek peak on August 5. http://waterdata.usgs.gov/co/nwis/uv/?site_no=09358000&PARAMeter_cd=00065.00060 The small daily peaks are normal for this time of year. NOTE... both sites automatically just show the last week of data. To go back to August 5 (or further) put 2015-08-05 in as the Begin Date and click on the "GO" button.

In terms of pre-existing conditions in the area, the USGS conducted an extensive study on the effects of mining and natural acid water in the area in the late 1990s and early 2000s. This link is a four page fact sheet summarizing over 1000 pages of investigations. It contains information on the pre-existing conditions that might be of interest to you.

http://pubs.usgs.gov/fs/2007/3051/pdf/FS07-3051_508.pdf

Let us know if you have additional questions.

Katie Walton-Day

On Fri, Aug 14, 2015 at 2:08 PM, Koontz, Heidi <hkoontz@usgs.gov> wrote:

Is this most appropriate for you guys? Who wants to call him back?

Many thanks,

Heidi

----- Forwarded message -----

From: <steve.gorman@thomsonreuters.com>

Date: Fri, Aug 14, 2015 at 1:48 PM

Subject: Reuters query RE: Gold King Mine discharge volume as per USGS stream gauge

To: dozman@usgs.gov, hkoontz@usgs.gov, mlubeck@usgs.gov

Cc: steve.gorman@thomsonreuters.com, GeneralNews.West@thomsonreuters.com

Greetings from Reuters,

I'm contacting you to inquire about ongoing measurements of the effluent outflow from the Gold King Mine into Cement Creek according to the USGS stream gauge located at or near the spill site. The EPA has put the overall volume of the spill at just over 3 million gallons, as calculated by this USGS stream gauge. But the agency also has said that effluent being discharged into the creek has continued at rates of between 400 gallons and 800 gallons per minute. At an average flow rate of 500 gallons per minute, that would add another 720,000 gallons a day to the total volume of the spill. Yet this is not being reflected in the information provided by the government. I realize that for the past several days, the effluent being discharged has undergone treatment in settling ponds that were constructed after the spill, so as to remove some of the dissolved metals before the wastewater empties into the creek. The EPA says concentrations of heavy metals in this pre-treated effluent is, in fact, at levels about or equal to pre-spill conditions. I'm also aware that Cement Creek's water quality was considered highly degraded before the spill, meaning that pre-spill levels of arsenic, mercury etc in Cement Creek are still likely to be elevated compared with what would be considered "normal" or even safe levels for a stream of good water quality. From that standpoint, it's a fair question to ask how much more of this wastewater, albeit somewhat "cleaner" than the original pulse of sludge, has spilled into local streams since Aug. 5. And since the stream gauge belongs to the USGS, I thought I'd put that question to your agency, since the EPA has refused to answer it.

Can anyone from the USGS shed some light on the just the question: how much effluent has gone into Cement Creek since the initial plume of wastewater was spilled on Aug. 5?

Thanks for your kind attention.

Steve Gorman

Reuters, Los Angeles

Steven Gorman
Correspondent, Los Angeles

Reuters News

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Heidi K. Koontz

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[www.usgs.gov](http://www.usgs.gov)

**Note: If you need immediate information about a recent earthquake please visit [earthquake.usgs.gov](http://earthquake.usgs.gov). If you'd like to speak with a seismologist about an event after hours, please call the 24/7 USGS National Earthquake Information Center at 303-273-8500. Thank you!**

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Katie Walton-Day

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